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CHAPTER 6 & 7 PRACTISE QUESTIONS

① FACTOR COMPLETELY

Ⓐ $50x^2y^2 - 10xy^2$

Ⓑ $x^2 + 10x - 11$

Ⓒ $x^2 - 2x - 63$

Ⓓ $4x^2 - 12x + 5$

Ⓔ $7x^2 - 27x - 4$

Ⓕ $2x^2 - x - 6$

Ⓖ $2x^2 + 5x - 18$

Ⓗ $36x^2 - 60x + 25$

Ⓙ $x^2 - 49$

Ⓜ $16x^2 - 121y^2$

② FACTOR COMPLETELY

Ⓐ $64x^3 + 27$

Ⓑ $8x^3 - 729y^3$

Ⓒ $15x^4 - 25x^3 + 10x^2$

Ⓓ $10x^3 - 270$

Ⓔ $12x^5 + 12x^3 - 4x^4 - 4x^2$

③ SOLVE EACH EQUATION

Ⓐ $3x^2 - 5x + 2 = 0$

Ⓔ $4x^2 - 9 = 0$

Ⓑ $3x^2 + 12x = 0$

Ⓕ $x^2 - 25 = 0$

Ⓒ $x^2 - 18x + 81 = 0$

Ⓖ $10x^2 - 2x = 0$

Ⓓ $x^3 = 10x^2 + 39x$

Ⓗ $3x^2 + 22x - 16 = 0$

4 Simplify

a $\frac{4x^3y^4}{6x^4y}$

b $\frac{5x-15}{3x+9} \cdot \frac{4x+12}{6x-18}$

c $\frac{x^2-4}{x^2-2x} \div \frac{6x^2+7x}{36x-9}$

d $\frac{x^2+4x-5}{x^2+7x+10}$

 $\frac{x-1}{x+4}$

e $\frac{2x^2-x}{4x^2-1} \cdot \frac{4x^2+4x+1}{3x} \div \frac{4x^2-2x-2}{6x^2-6x}$

f $\frac{3x}{x-5} - \frac{2x-25}{5-x}$

g $\frac{x}{x-2} + \frac{4+2x}{x^2-4}$

h $\frac{3x-1}{x^2-10x+25} - \frac{3}{x-5}$

5) Solve

a) $\frac{1}{2} - \frac{2}{x^2-1} = \frac{1}{x+1}$

b) $1 = \frac{35}{x-4} - \frac{35}{x}$

c) $\frac{3x-1}{4x+7} = 1 - \frac{6}{x+7}$

d) $\frac{x}{x-1} = \frac{-1}{x-1} + \frac{12}{x^2-x}$

6) Graph the quadratic (indicate vertex & intercepts)

a) $y = x^2 + 2x - 5$

b) $y = -x^2 - 10x - 25$

c) $y = 3x^2 - 6x + 4$

